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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09-670,756	09-27-2000	Kenneth Rhodes	MNI-070CP4	6507

959 7590 03-15-2002

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28 STATE STREET  
BOSTON, MA 02109

EXAMINER
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MURPHY, JOSEPH F

ART UNIT	PAPER NUMBER
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1646

DATE MAILED: 03/15/2002

8

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	09/670,756	RHODES ET AL.
	Examiner	Art Unit
	Joseph F Murphy	1646

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

1)  Responsive to communication(s) filed on 27 *September 2000* .

2a)  This action is **FINAL**.                    2b)  This action is non-final.

3)  Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

4)  Claim(s) 1-54 is/are pending in the application.

4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

5)  Claim(s) \_\_\_\_\_ is/are allowed.

6)  Claim(s) \_\_\_\_\_ is/are rejected.

7)  Claim(s) \_\_\_\_\_ is/are objected to.

8)  Claim(s) 1-54 are subject to restriction and/or election requirement.

## Application Papers

9)  The specification is objected to by the Examiner.

10)  The drawing(s) filed on \_\_\_\_\_ is/are: a)  accepted or b)  objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)  The proposed drawing correction filed on \_\_\_\_\_ is: a)  approved b)  disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)  The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)  Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a)  All b)  Some \* c)  None of:  
1.  Certified copies of the priority documents have been received.  
2.  Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
-  Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 2(a)).  
See the attached detailed Office action for a list of the certified copies not received.

14)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a)  The translation of the foreign language provisional application has been received.

15)  Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1)  Notice of References Cited (PTO-892)  
2)  Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3)  Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_

4)  Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_  
5)  Notice of Informal Patent Application (PTO-152)  
6)  Other: \_\_\_\_\_

## DETAILED ACTION

### *Election/Restrictions*

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-7, 12 and 18, drawn to a KChIP1 polynucleotide selected from the list consisting of SEQ ID NO: 1, 3, 5, 7, 9 and 11, a vector, a host cell, and a method of producing a polypeptide, classified in class 435, subclass 69.1.
- II. Claims 1-7, 12 and 18, drawn to a KChIP2 polynucleotide selected from the list consisting of SEQ ID NO: 46, 47, 13, 15, 17, 19, 21, 23, 25, 27, 29, a vector, a host cell, and a method of producing a polypeptide, classified in class 435, subclass 69.1.
- III. Claims 1-7, 12 and 18, drawn to a KChIP3 polynucleotide selected from the list consisting of SEQ ID NO: 31, , 33, 35 and 39 a vector, a host cell, and a method of producing a polypeptide, classified in class 435, subclass 69.1.
- IV. Claims 1-7, 12 and 18, drawn to a W28559 polynucleotide comprising SEQ ID NO: 37, a vector, a host cell, and a method of producing a polypeptide, classified in class 435, subclass 69.1.
- V. Claims 1-7, 12 and 18, drawn to a KChIP4 polynucleotide comprising SEQ ID NO: 48, 50, 69, 71 a vector, a host cell, and a method of producing a polypeptide, classified in class 435, subclass 69.1.
- VI. Claims 1-7, 12 and 18, drawn to a 33b07 polynucleotide comprising SEQ ID NO: 52, 54, a vector, a host cell, and a method of producing a polypeptide, classified in class 435, subclass 69.1.

(80) The selected, most cost effective method of producing a polypeptide, classified in class 435, subclass 69.1.

- VIII. Claims 1-7, 12 and 18, drawn to a 7s Novel polynucleotide comprising SEQ ID NO: 58, a vector, a host cell, and a method of producing a polypeptide, classified in class 435, subclass 69.1.
- IX. Claims 1-7, 12 and 18, drawn to a 29x polynucleotide selected from the list consisting of SEQ ID NO: 60, 62, a vector, a host cell, and a method of producing a polypeptide, classified in class 435, subclass 69.1.
- X. Claims 1-7, 12 and 18, drawn to a 5p polynucleotide comprising SEQ ID NO: 63, a vector, a host cell, and a method of producing a polypeptide, classified in class 435, subclass 69.1.
- XI. Claims 1-7, 12 and 18, drawn to a 7q polynucleotide comprising SEQ ID NO: 65, a vector, a host cell, and a method of producing a polypeptide, classified in class 435, subclass 69.1.
- XII. Claims 1-7, 12 and 18, drawn to a 19r polynucleotide comprising SEQ ID NO: 67, a vector, a host cell, and a method of producing a polypeptide, classified in class 435, subclass 69.1.
- XIII. Claims 8-10, drawn to an isolated KChIP1 polypeptide comprising SEQ ID NO: 2, 4, 6, 8, 10, 12, classified in class 530, subclass 350.
- XIV. Claims 8-10, drawn to an isolated KChIP2 polypeptide comprising SEQ ID NO: 14, 16, 18, 20, 22, 24, 26, 28, 30, classified in class 530, subclass 350.
- XV. Claims 8-10, drawn to an isolated KChIP3 polypeptide comprising SEQ ID NO: 32, 34, 36 and 40, classified in class 530, subclass 350.
- XVI. Claims 8-10, drawn to an isolated W28559 polypeptide comprising SEQ ID NO: 37, classified in class 530, subclass 350.
- XVII. Claims 8-10, drawn to an isolated KChIP4 polypeptide comprising SEQ ID NO: 49, 51, 54, 52, classified in class 530, subclass 350.
- XVIII. Claims 8-10, drawn to an isolated 33b07 polypeptide comprising SEQ ID NO: 53, 55, classified in class 530, subclass 350.
- XIX. Claims 8-10, drawn to an isolated 1p polypeptide comprising SEQ ID NO: 57, classified in class 530, subclass 350.

- XX. Claims 8-10, drawn to an isolated 7s polypeptide comprising SEQ ID NO: 59, classified in class 530, subclass 350.
- XXI. Claims 8-10, drawn to an isolated 29x polypeptide comprising SEQ ID NO: 61, classified in class 530, subclass 350.
- XXII. Claims 8-10, drawn to an isolated 5p polypeptide comprising SEQ ID NO: 64, classified in class 530, subclass 350.
- XXIII. Claims 8-10, drawn to an isolated 7q polypeptide comprising SEQ ID NO: 66, classified in class 530, subclass 350.
- XXIV. Claims 8-10, drawn to an isolated 19r polypeptide comprising SEQ ID NO: 68, classified in class 530, subclass 350.
  
- XXV. Claims 11 and 15 drawn to an antibody which binds a KChIP1 polypeptide, and a kit, classified class 530, subclass 387.1.
- XXVI. Claims 11 and 15 drawn to an antibody which binds a KChIP2 polypeptide, and a kit, classified class 530, subclass 387.1.
- XXVII. Claims 11 and 15 drawn to an antibody which binds a KChIP3 polypeptide, and a kit, classified class 530, subclass 387.1.
- XXVIII. Claims 11 and 15 drawn to an antibody which binds a W28559 polypeptide, and a kit, classified class 530, subclass 387.1.
- XXIX. Claims 11 and 15 drawn to an antibody which binds a KChIP4 polypeptide, and a kit, classified class 530, subclass 387.1.
- XXX. Claims 11 and 15 drawn to an antibody which binds a 33b07 polypeptide, and a kit, classified class 530, subclass 387.1.
- XXXI. Claims 11 and 15 drawn to an antibody which binds a 1p polypeptide, and a kit, classified class 530, subclass 387.1.
- XXXII. Claims 11 and 15 drawn to an antibody which binds a 7s polypeptide, and a kit, classified class 530, subclass 387.1.
- XXXIII. Claims 11 and 15 drawn to an antibody which binds a 29x polypeptide, and a kit, classified class 530, subclass 387.1.

XXXIV. Claims 11 and 15 drawn to an antibody which binds a 5p polypeptide, and a kit, classified class 530, subclass 387.1.

XXXV. Claims 11 and 15 drawn to an antibody which binds a 7q polypeptide, and a kit, classified class 530, subclass 387.1.

XXXVI. Claims 11 and 15 drawn to an antibody which binds a 19r polypeptide, and a kit, classified class 530, subclass 387.1.

XXXVII. Claims 13-14 drawn to a method of detecting the presence of KChIP1 polypeptide, classified in class 435, subclass 7.1.

XXXVIII. Claims 13-14 drawn to a method of detecting the presence of KChIP2 polypeptide, classified in class 435, subclass 7.1.

XXXIX. Claims 13-14 drawn to a method of detecting the presence of KChIP3 polypeptide, classified in class 435, subclass 7.1.

XL. Claims 13-14 drawn to a method of detecting the presence of W28559 polypeptide, classified in class 435, subclass 7.1.

XLI. Claims 13-14 drawn to a method of detecting the presence of KChIP4 polypeptide, classified in class 435, subclass 7.1.

XLII. Claims 13-14 drawn to a method of detecting the presence of 33b07 polypeptide, classified in class 435, subclass 7.1.

XLIII. Claims 13-14 drawn to a method of detecting the presence of 1p polypeptide, classified in class 435, subclass 7.1.

XLIV. Claims 13-14 drawn to a method of detecting the presence of 7s polypeptide, classified in class 435, subclass 7.1.

XLV. Claims 13-14 drawn to a method of detecting the presence of 29x polypeptide, classified in class 435, subclass 7.1.

XLVI. Claims 13-14 drawn to a method of detecting the presence of 5p polypeptide, classified in class 435, subclass 7.1.

XLVII. Claims 13-14 drawn to a method of detecting the presence of 7q polypeptide, classified in class 435, subclass 7.1.

XLVIII. Claims 13-14 drawn to a method of detecting the presence of 19r polypeptide, classified in class 435, subclass 7.1.

XLIX. Claims 16-17, 30-41, drawn to a method of detecting the presence of KChIP1 polynucleotide, classified in class 435, subclass 6.

L. Claims 16-17, 30-41, drawn to a method of detecting the presence of KChIP2 polynucleotide, classified in class 435, subclass 6.

LI. Claims 16-17, 30-41, drawn to a method of detecting the presence of KChIP3 polynucleotide, classified in class 435, subclass 6.

LII. Claims 16-17, 30-41, drawn to a method of detecting the presence of W28559 polynucleotide, classified in class 435, subclass 6.

LIII. Claims 16-17, 30-41, drawn to a method of detecting the presence of KChIP4 polynucleotide, classified in class 435, subclass 6.

LIV. Claims 16-17, 30-41, drawn to a method of detecting the presence of 33b07 polynucleotide, classified in class 435, subclass 6.

LV. Claims 16-17, 30-41, drawn to a method of detecting the presence of 1p polynucleotide, classified in class 435, subclass 6.

LVI. Claims 16-17, 30-41, drawn to a method of detecting the presence of 7s polynucleotide, classified in class 435, subclass 6.

LVII. Claims 16-17, 30-41, drawn to a method of detecting the presence of 29x polynucleotide, classified in class 435, subclass 6.

LVIII. Claims 16-17, 30-41, drawn to a method of detecting the presence of 5p polynucleotide, classified in class 435, subclass 6.

LIX. Claims 16-17, 30-41, drawn to a method of detecting the presence of 7q polynucleotide, classified in class 435, subclass 6.

LX. Claims 16-17, 30-41, drawn to a method of detecting the presence of 19p polynucleotide, classified in class 435, subclass 6

- LXI. Claims 19-29, drawn to a method of identifying a compound that binds KChIP1, classified in class 435, subclass 7.2.
- LXII. Claims 19-29, drawn to a method of identifying a compound that binds KChIP2, classified in class 435, subclass 7.2.
- LXIII. Claims 19-29, drawn to a method of identifying a compound that binds KChIP3, classified in class 435, subclass 7.2.
- LXIV. Claims 19-29, drawn to a method of identifying a compound that binds W28559, classified in class 435, subclass 7.2.
- LXV. Claims 19-29, drawn to a method of identifying a compound that binds KChIP4, classified in class 435, subclass 7.2.
- LXVI. Claims 19-29, drawn to a method of identifying a compound that binds 33b07, classified in class 435, subclass 7.2.
- LXVII. Claims 19-29, drawn to a method of identifying a compound that binds 1p, classified in class 435, subclass 7.2.
- LXVIII. Claims 19-29, drawn to a method of identifying a compound that binds 7s, classified in class 435, subclass 7.2.
- LXIX. Claims 19-29, drawn to a method of identifying a compound that binds 29x, classified in class 435, subclass 7.2.
- LXX. Claims 19-29, drawn to a method of identifying a compound that binds 5p, classified in class 435, subclass 7.2.
- LXXI. Claims 19-29, drawn to a method of identifying a compound that binds 7q, classified in class 435, subclass 7.2.
- LXXII. Claims 19-29, drawn to a method of identifying a compound that binds 19r, classified in class 435, subclass 7.2.

LXXIII. Claims 41-44, drawn to a method of treatment comprising administration of

KChIP1 polypeptide, classified in class 514, subclass 2.

LXXIV. Claims 42-54, drawn to a method of treatment comprising administration of KChIP2 polypeptide, classified in class 514, subclass 2.

LXXV. Claims 42-54, drawn to a method of treatment comprising administration of KChIP3 polypeptide, classified in class 514, subclass 2.

LXXVI. Claims 42-54, drawn to a method of treatment comprising administration of W28559 polypeptide, classified in class 514, subclass 2.

LXXVII. Claims 42-54, drawn to a method of treatment comprising administration of KChIP4 polypeptide, classified in class 514, subclass 2.

LXXVIII. Claims 42-54, drawn to a method of treatment comprising administration of 33b07 polypeptide, classified in class 514, subclass 2.

LXXIX. Claims 42-54, drawn to a method of treatment comprising administration of 1p polypeptide, classified in class 514, subclass 2.

LXXX. Claims 42-54, drawn to a method of treatment comprising administration of 7s polypeptide, classified in class 514, subclass 2.

LXXXI. Claims 42-54, drawn to a method of treatment comprising administration of 29x polypeptide, classified in class 514, subclass 2.

LXXXII. Claims 42-54, drawn to a method of treatment comprising administration of 5p polypeptide, classified in class 514, subclass 2.

LXXXIII. Claims 42-54, drawn to a method of treatment comprising administration of 7q polypeptide, classified in class 514, subclass 2.

LXXXIV. Claims 42-54, drawn to a method of treatment comprising administration of 19r polypeptide, classified in class 514, subclass 2.

The inventions are distinct, each from the other, for the following reasons:

Inventions (I-XII), (XIII-XXIV) and (XXV-XXXVI) are independent and distinct, each from the other, because they are products which possess characteristic differences in structure and function, and each has an independent utility, that is distinct for each invention which cannot be exchanged. The polynucleotides of invention (I-XII) can be used as hybridization probes. The polypeptide of invention (XIII-XXIII) can be used for the in vitro assays. The antibodies of invention (XXV-XXXVI) can be used for immunoprecipitation.

Inventions (XXXVII-XLVIII), (XLIX-LX), (LXI-LXXII) and (LXXIII-LXXXIV) are independent and distinct, each from the other, because the methods are practiced with materially different starting materials, have materially different process steps, and are for materially different purposes.

Inventions (I-XII) and (XLIX-LX) are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the polynucleotide of inventions (I-XII) can be used for the production of protein.

Inventions (XIII-XXIV) and (LXI-LXXII) are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the polypeptides of inventions (XIII-XXIV) can be used for the production of antibodies.

Inventions (XIII-XXIV) and (LXXIII-LXXXIV) are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the polypeptides of inventions (XIII-XXIV) can be used for the production of antibodies.

Inventions (XXV-XXXVI) and (XXXVII-XLVIII) are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the antibody of invention (XXV-XXXVI) can be used for purification of the protein by immunoprecipitation.

Inventions (I-XII) and (XXXVII-XLVIII), (LXI-LXXII) and (LXXIII-LXXXIV) are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as capable of use together.

Inventions (XIII-XXIV) and (XXXVII-XLVIII) and (XLIX-LX) are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as capable of use together.

Inventions (XXV-XXXVI) and (XLIX-LX), (LXI-LXXII) and (LXXIII-LXXXIV) are unrelated. Inventions are unrelated if it can be shown that they are not disclosed as capable of use together and they have different modes of operation, different functions, or different effects (MPEP § 806.04, MPEP § 808.01). In the instant case the different inventions are not disclosed as capable of use together.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

Applicant is advised that the reply to this requirement to be complete must include an election of the invention to be examined even though the requirement be traversed (37 CFR 1.143).

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a petition under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

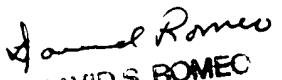
***Advisory Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joseph F. Murphy whose telephone number is 703-305-7245. The examiner can normally be reached on M-F 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on 703-308-6564. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-3014 for regular communications and 703-308-0294 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0196.

  
Joseph F. Murphy, Ph. D.  
Patent Examiner  
Art Unit 1646  
March 12, 2002

  
DAVID S. ROMEO  
PRIMARY EXAMINER